

**REMARKS**

In the present Amendment, Claims 1, 11, 34, 35 and 37 have been amended to correct the term "law" to "raw." Claim 16 has been amended to correct " $T_3 \square T_2$  and  $T_1 \square T_2$ " to --  $T_3-T_2$  and  $T_1-T_2$ --. Section 112 support for this amendment may be found, for example, at page 38, line 8 of the specification. No new matter has been added, and entry of the Amendment is respectfully requested.

Upon entry of the Amendment, Claims 1-3 and 5-39 will be pending.

In paragraph Nos. 2 and 3 of the Action,, Claims 1 and 11 have been objected to because the word "law" should be spelled as --raw--.

As noted, Claims 1 and 11 have been amended to address the Examiner's concern. Withdrawal of the objection to Claims 1 and 11 is respectfully requested.

In paragraph No. 5 of the Action, Claims 1, 5, 7, 8, 10-20 and 22-33 have been "provisionally" rejected for obviousness-type double patenting as allegedly being unpatentable over Claims 1, 4, 6, 8-15 and 17-29 of co-pending application No. 10/450,151.

Applicants submit that this rejection should be withdrawn because Claim 1 is not obvious over the co-pending application No. 10/450,151, since the co-pending '151 application does not disclose "a sealing portion" recited in Claim 1, which will be discussed below in more detail. Claims 5, 7, 8, 10-20 and 22-33 depend from Claim 1, directly or indirectly, accordingly, Claims 5, 7, 8, 10-20 and 22-33 are not obvious over Claims 1, 4, 6, 8-15 and 17-29 of co-pending application No. 10/450,151.

In paragraph No. 8 of the Action, Claims 1-39 have been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Vodakov et al (US 6,562,131 B2) in view of JP 2002-255693.

Applicants submit that this rejection should be withdrawn because Vodakov et al and JP '693 do not disclose or render obvious the present invention, either alone or in combination.

JP '693 is relied upon as teaching a method for producing single crystals of SiC by disposing seed crystals and a material for sublimation at positions opposite each other within a reaction container (abstract and Figure 2). The Examiner acknowledges that JP '693 does not teach providing seed crystal upon a sealed member, different shapes for the single crystals, varying the heat temperature of the heating means, the exact purity of the SiC single crystal after sublimation.

Vodakov et al disclose that "[p]referably crucible 105 is capable of being evacuated and sealed, either directly or indirectly through the use of an external container 301." See, col. 5, lines 6-8. Vodakov et al also disclose that "as a result, material losses from source 101 are substantially reduced. Additionally, sealing crucible 105 ... prevents foreign impurities from the environment from entering into growth zone 107." See, col. 5, lines 42-46.

According to the present application, a sealing portion is provided to reaction vessel inside for the sake of "growing all raw materials sublimated on seed crystal." When silicon carbide powders, which are sublimation raw materials, are heated by a first induction heating coil, Si, Si<sub>2</sub>C, SiC<sub>2</sub> or the like are generated, and all of them need to reach seed crystal for growing. To attain this object, according to the present invention, a sealing portion is provided to the reaction vessel inside (mere covering of outside is not enough to obtain such sealing effects), which allows growth of all of said sublimation raw materials on seed crystal without fail.

Although there is a description of sealing in Vodakov et al, it does not refer to any provision to reaction vessel inside, and sealing is attained by either sealing the crucible 105

directly or using the container **301**. With such a sealing, prevention of leakage of sublimation raw materials into the crucible **105** and the container **301** is not possible, and “growing all raw materials sublimated on seed crystal” that is an object of the present invention cannot be attained.

Further, Applicants disclose that “[s]ince the sealing portion is provided, leak of the sublimation material from the sublimation atmosphere can be prevented. Consequently the fluctuation of the gas phase composition ratio in the sublimation atmosphere can be prevented, thereby a high quality large size single crystal can be produced.” See, page 9, lines 18-22 of the specification.

Applicants also disclose that “[s]ince the thermal expansion coefficient of the sealing portion is substantially the same as that of the seed crystal, a high quality large size single crystal can be produced while preventing generation of cracking due to the temperature difference between the crucible contacted with the grown single crystal and the growing temperature. Furthermore, since the sealing portion covers the single crystal growth possible region in the sublimation atmosphere, the effect can further be improved by preventing generation of cracking due to the temperature difference between the crucible and the growing temperature further effectively.” See, page 10, lines 2-12 of the specification.

In view of the above, reconsideration and withdrawal of the § 103(a) rejection based on Vodakov et al in view of JP ‘693 are respectfully requested.

In paragraph No. 10 of the Action, Claims 2-4 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 4 was cancelled in the Preliminary Amendment filed November 29, 2005. Claims 2 and 3 have been included in the § 103(a) rejection based on Vodakov et al in view of JP '693. Clarification is respectfully requested.

Allowance is respectfully requested. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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